

Amendments to the Claims: This listing of claims will replace all prior versions, and listings, of claims in the application

Listing of Claims:

1. (Original) A biomolecule bead-containing tube containing a biomolecule bead array in which biomolecule beads consisting of a spherical bead and a specific biomolecule species immobilized thereon are arranged in a tubular container made of a material transmitting a light having a specific wavelength, wherein a spherical mark bead made of a material optically distinguishable from the material constituting the spherical bead of said biomolecule bead is inserted in a predetermined order between specific biomolecule beads in the biomolecule bead array.
2. (Original) A biomolecule bead-containing tube according to claim 1, wherein the mark beads are arranged corresponding to an identification code indicating identification data.
3. (Original) A biomolecule bead-containing tube according to claim 1, having a first region where a number of the biomolecule beads is larger than a number of the mark beads, and a second region where a number of the mark beads is larger than a number of the biomolecule beads.
4. (Original) A biomolecule bead-containing tube according to claim 3, wherein at least the mark beads are arranged in the second region corresponding to an identification code indicating identification data.
5. (Currently Amended) A biomolecule bead-containing tube according to claim 2[[or 4]], wherein the identification data comprise an identification number for the biomolecule beads-containing tube.
6. (Original) A biomolecule bead-containing tube according to claim 3, wherein the mark beads are arranged in the first region corresponding to an identification code indicating identification data.
7. (Currently Amended) A reproducer reading out data recorded in a biomolecule bead-containing tube, ~~according to claim 2~~ biomolecule bead-containing tube containing a biomolecule bead array in which biomolecule beads consisting of a spherical bead and a specific biomolecule species immobilized thereon are arranged in a tubular container made of a material transmitting a light having a specific wavelength, wherein a spherical mark bead made of a material optically distinguishable from the material constituting the spherical bead of said biomolecule bead is inserted in a predetermined order between specific biomolecule beads in the biomolecule bead array, wherein the mark beads are arranged corresponding to an identification code indicating identification data, said data read out by irradiating the biomolecule bead-containing tube with a light and detecting a transmitted light or a reflected light from at least a mark bead.
8. (Original) A reproducer according to claim 7, reading out the data; and obtaining information of a DNA or a protein immobilized on the biomolecule beads in the biomolecule bead-containing tube by irradiating the biomolecule beads with a light and observing fluorescence from the biomolecule beads.

9. (Currently Amended) A reproducer according to claim 7[[or 8]], obtaining identification information as the data.

10. (Original) A reproducer according to claim 9, obtaining arrangement information for the biomolecule beads in the biomolecule bead-containing tube based on the identification information obtained from the biomolecule bead-containing tube.

11. (Original) A reproducer according to claim 10, obtaining information of a DNA or a protein immobilized on the biomolecule beads in the biomolecule bead-containing tube based on the arrangement information for the biomolecule beads obtained based on the identification information.

12. (Currently Amended) A reproducer according to claim 8[[or 11]], diagnosing a disease from the information of a DNA or a protein obtained based on the identification information.

13. (New) A biomolecule bead-containing tube according to claim 4, wherein the identification data comprise an identification number for the biomolecule beads-containing tube.

14. (New) A reproducer according to claim 8, obtaining identification information as the data.

15. (New) A reproducer according to claim 14, obtaining arrangement information for the biomolecule beads in the biomolecule bead-containing tube based on the identification information obtained from the biomolecule bead-containing tube.

16. (New) A reproducer according to claim 14, obtaining information of a DNA or a protein immobilized on the biomolecule beads in the biomolecule bead-containing tube based on the arrangement information for the biomolecule beads obtained based on the identification information.

17. (New) A reproducer according to claim 11, diagnosing a disease from the information of a DNA or a protein obtained based on the identification information.

18. (New) A reproducer according to claim 16, diagnosing a disease from the information of a DNA or a protein obtained based on the identification information.